

Assumptions:

- * Streamflows were from the 17 May ESP run, which uses current basin conditions combined with 44 historical weather patterns (temperatures and precipitation) to produce 44 ESP hydrographs for 2005.
- * Starting elevations are observed April 30, 2005 elevations.
- * Grand Coulee tries to meet 135,000 cfs in May while not drafting below 1240 ft. In June the project refills to 1288 ft in all years, and fills above 1288 ft if Priest Rapids flows are above 130,000 cfs. Summer lake targets are 1285.0 ft in July and 1278 ft in August (per the BiOp).
- * Hungry Horse operates in May for a controlled refill by 30 June and meets minimum flow of 3250 cfs at Columbia Falls. The project drafts to 3540 ft by 31 Aug.
- * Brownlee operates to flood control elevations, which is elevation 2077 ft (or full pool) and drafts some in July - August.
- * Dworshak targets an upper limit of 1597.9 ft by May 31 **with a minimum outflow of 7.7 kcfs for the month (assumes actual releases through May 16, 12,000 cfs through May 18, and minimum flow of 1,500 cfs for the remainder of the month)**. Dworshak targets full in June and drafts to 1534 ft by 31 Aug.
- * Libby targets full in June while maintaining a minimum flow in May of 11,000 cfs and 10,200 cfs out in June for sturgeon, based on a Tier 2 sturgeon pulse. Libby drafts to 2439 ft by 31 Aug, with a minimum bull trout flow of 7,000 cfs.

Results:

Priest Rapids Meets the Following Flow Objectives:

Month	Occurrences out of 44 Years	Average Flow for 44 Years (kcfs)	Flow Objective* (kcfs)
May	44	135	135
Jun	20	129	130

* Note: Flow objectives listed may be less than what is prescribed in the BiOp but were used for modeling.

Lower Granite Meets the Following Flow Objectives:

Month	Occurrences out of 44 Years	Average Flow for 44 Years (kcfs)	Flow Objective* (kcfs)
May	15	84	85
Jun	7	59	73
Jul	0	32	50
Aug 15	0	29	50
Aug 31	0	29	50

McNary Meets the Following Flow Objectives:

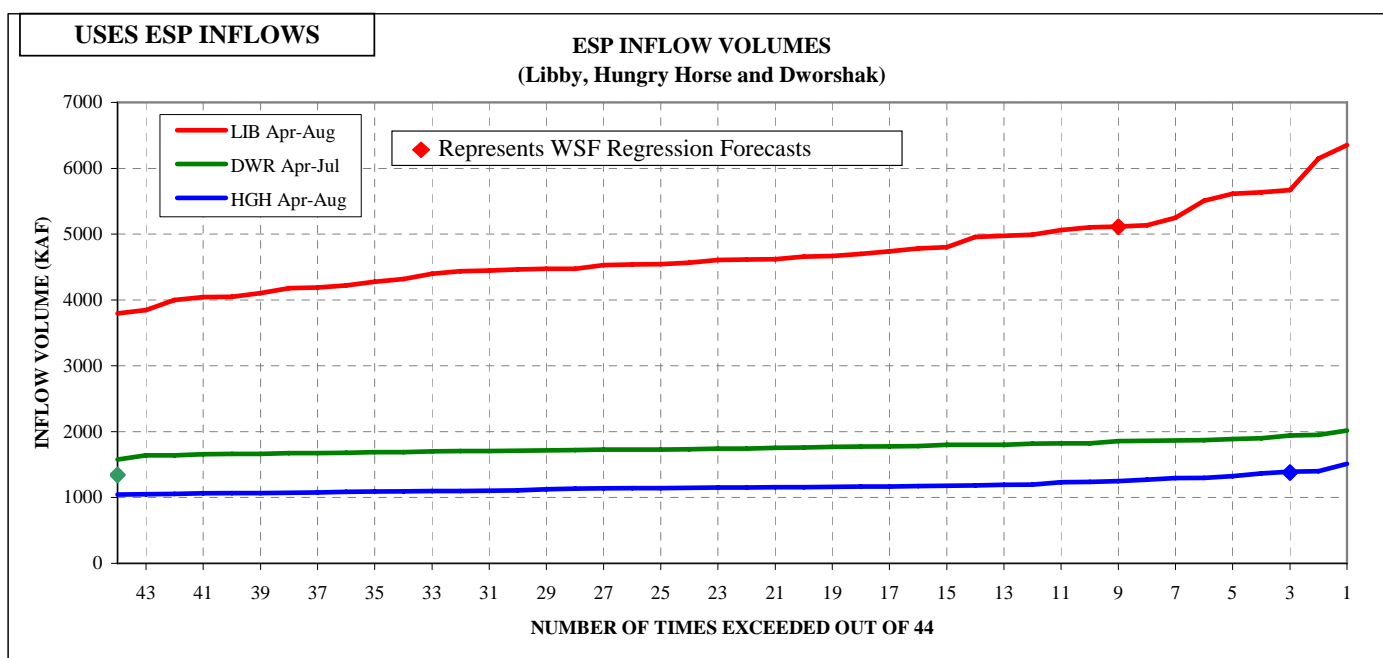
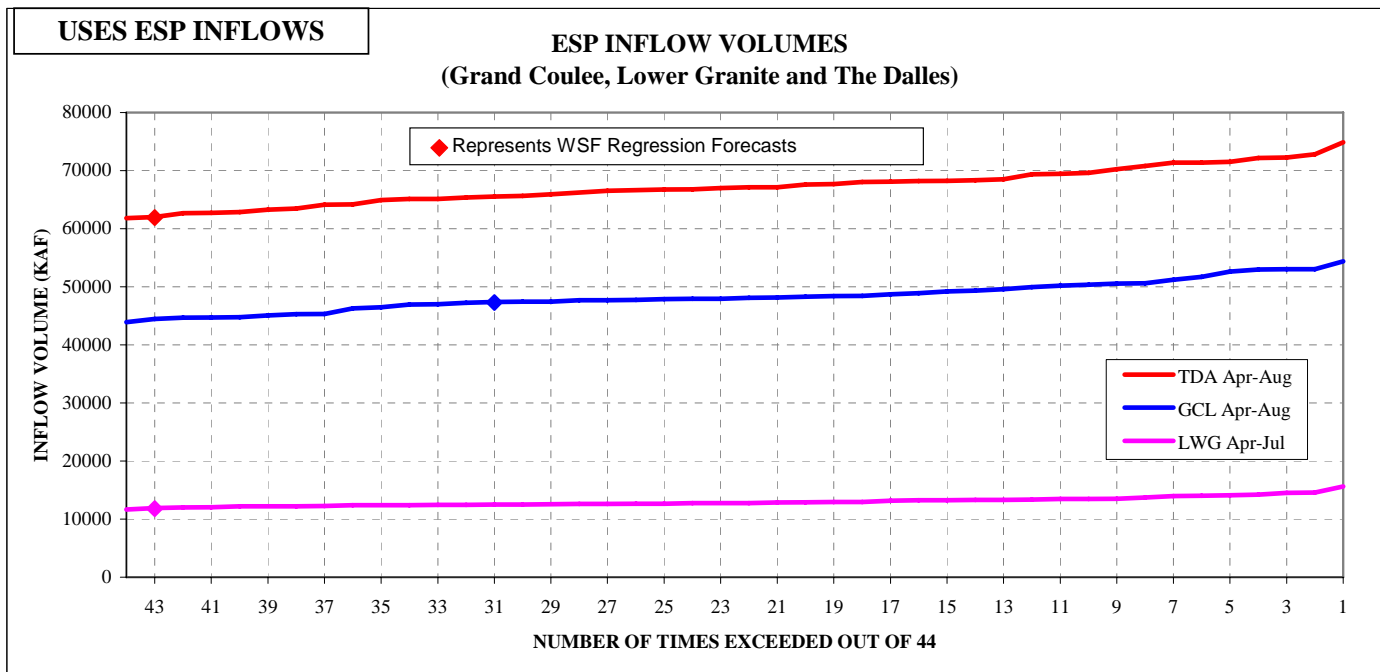
Month	Occurrences out of 44 Years	Average Flow for 44 Years (kcfs)	Flow Objective* (kcfs)
May	44	231	220
Jun	5	192	220
Jul	0	161	200
Aug 15	0	145	200
Aug 31	0	140	200

Projects Refill by 30 June:

Month	Occurrences out of 44 Years	Average Elevation on 30 Jun for 44 Years
Libby	27	2457.1
Hungry Horse	44	3560.0
Grand Coulee	44	1288.8
Dworshak	44	1600.0

Period Average Flows (kcfs):

	Obs FEB 1-28	Obs MAR 1-28	Obs APR 1-15	Obs APR 16-30	MAY 1-31	JUN 1-30	JUL 1-31	AUG 1-15	AUG 16-31
LIB	4.0	4.0	4.0	4.0	11.0	13.0	16.3	16.8	15.8
HGH	1.0	0.9	2.1	7.2	4.5	3.3	5.2	5.5	4.4
GCL	101	91	76	82	117	116	120	110	105
PRD	111	100	85	95	135	129	126	113	108
DWR	1.6	1.6	3.6	5.4	10.6	5.5	10.1	10.1	10.3
BRN	10	11	13	12	18	11	8	11	12
LWG	21	22	39	45	84	59	32	29	29
MCN	134	123	132	147	231	192	161	145	140
TDA	140	125	136	143	235	186	159	145	141
BON	138	130	143	153	238	189	161	147	143



Volume Comparison Table (ESP versus Regression (May Final)):

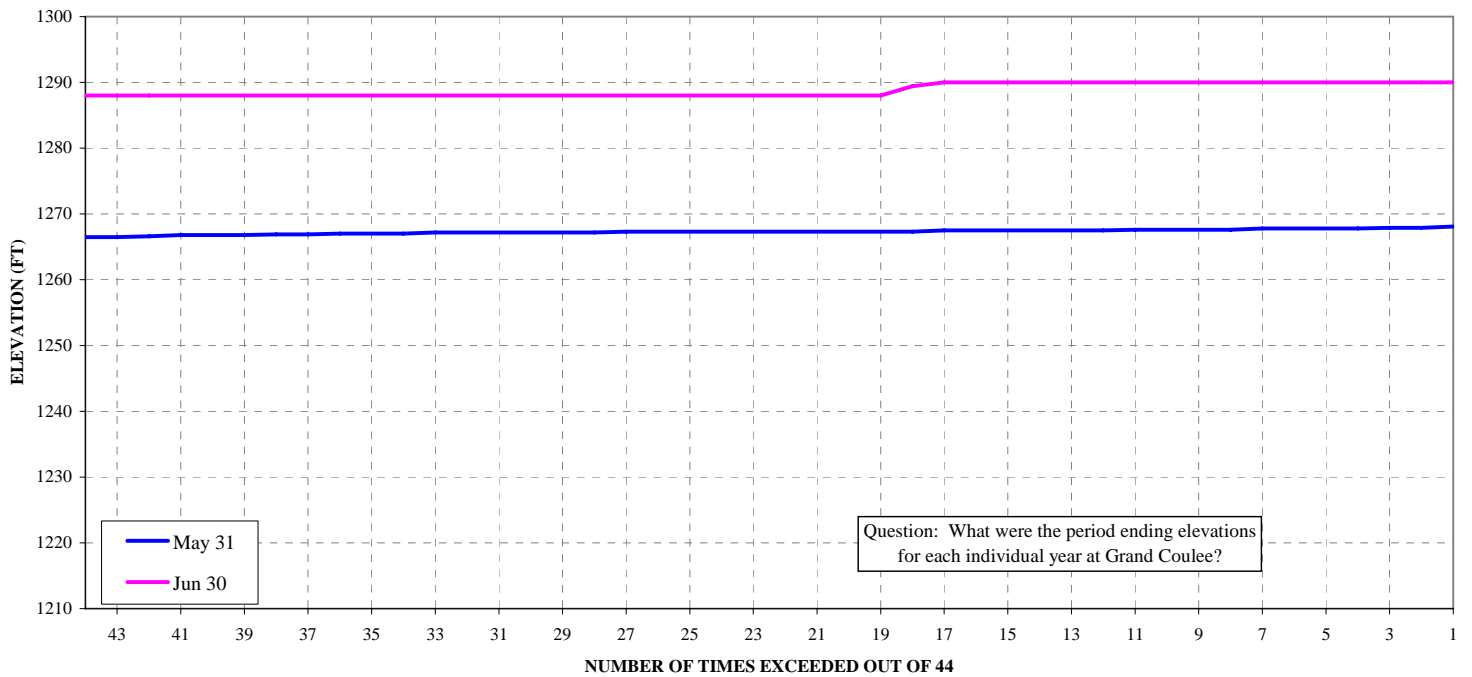
	Forecast Period	Official WSF (Regression)			ESP Volumes				
		Volume (kaf)	Percent of Average	30 year Average (kaf)	10% Exceedance Probability	30% Exceedance Probability	50% Exceedance Probability	70% Exceedance Probability	90% Exceedance Probability
Grand Coulee	Apr-Aug	47300	78%	60290	52300	49400	48000	47400	44900
Lower Granite	Apr-Jul	11800	55%	21550	14100	13300	12800	12500	12200
The Dalles	Apr-Aug	61900	66%	93090	71500	68300	67000	65500	63000
Hungry Horse *	Apr-Aug	1379	67%	2070	1320	1180	1150	1100	1070
Libby **	Apr-Aug	5111	82%	6248	5460	4860	4610	4440	4060
Dworshak **	Apr-Jul	1344	51%	2645	1870	1800	1740	1710	1660

* USBR Official Forecast (April Final)

** Corps Official Forecast (April Final)

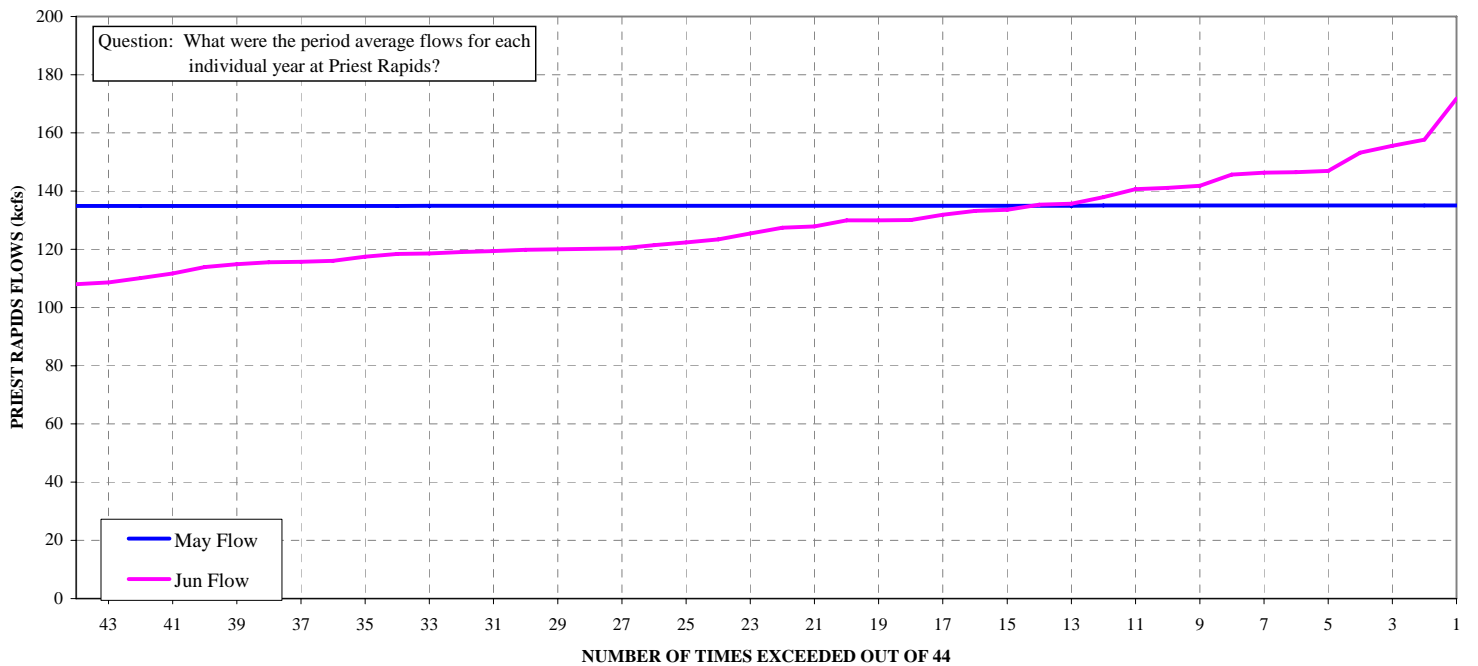
USES ESP INFLOWS

GRAND COULEE ESP LAKE ROOSEVELT ELEVATIONS



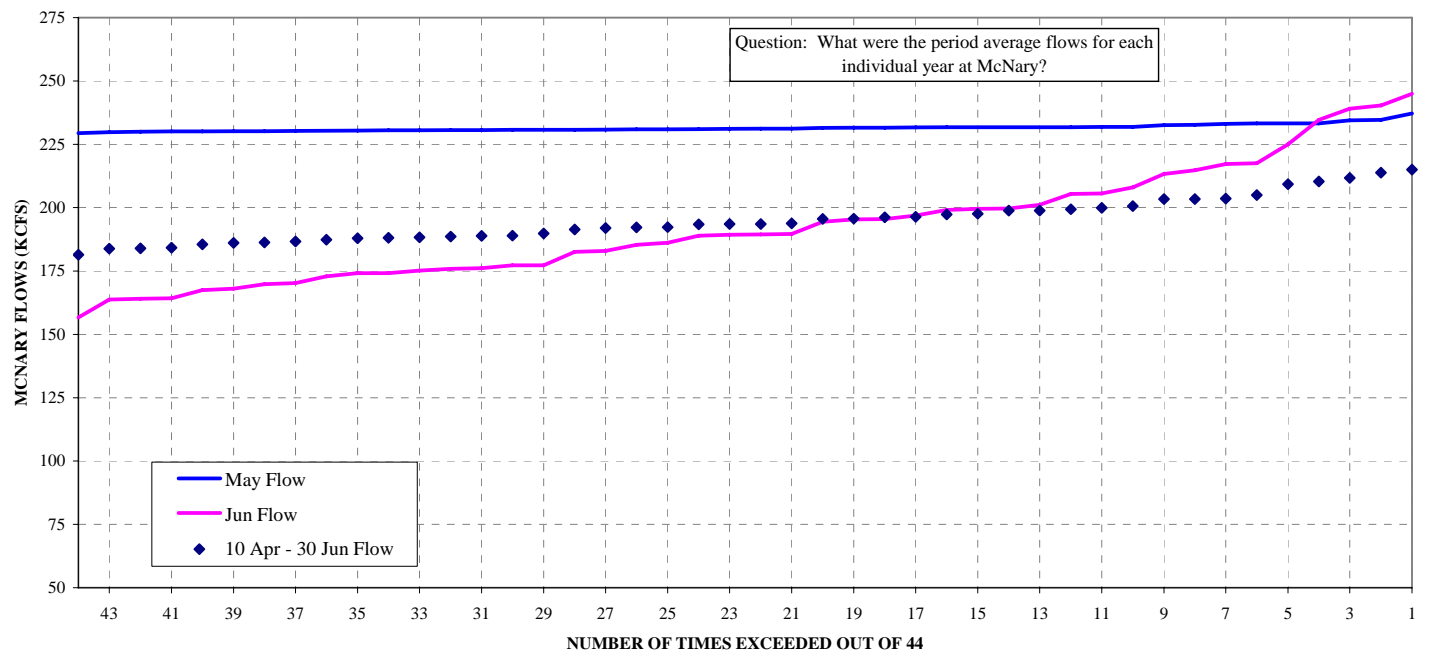
USES ESP INFLOWS

PRIEST RAPIDS ESP APRIL - JUNE FLOWS



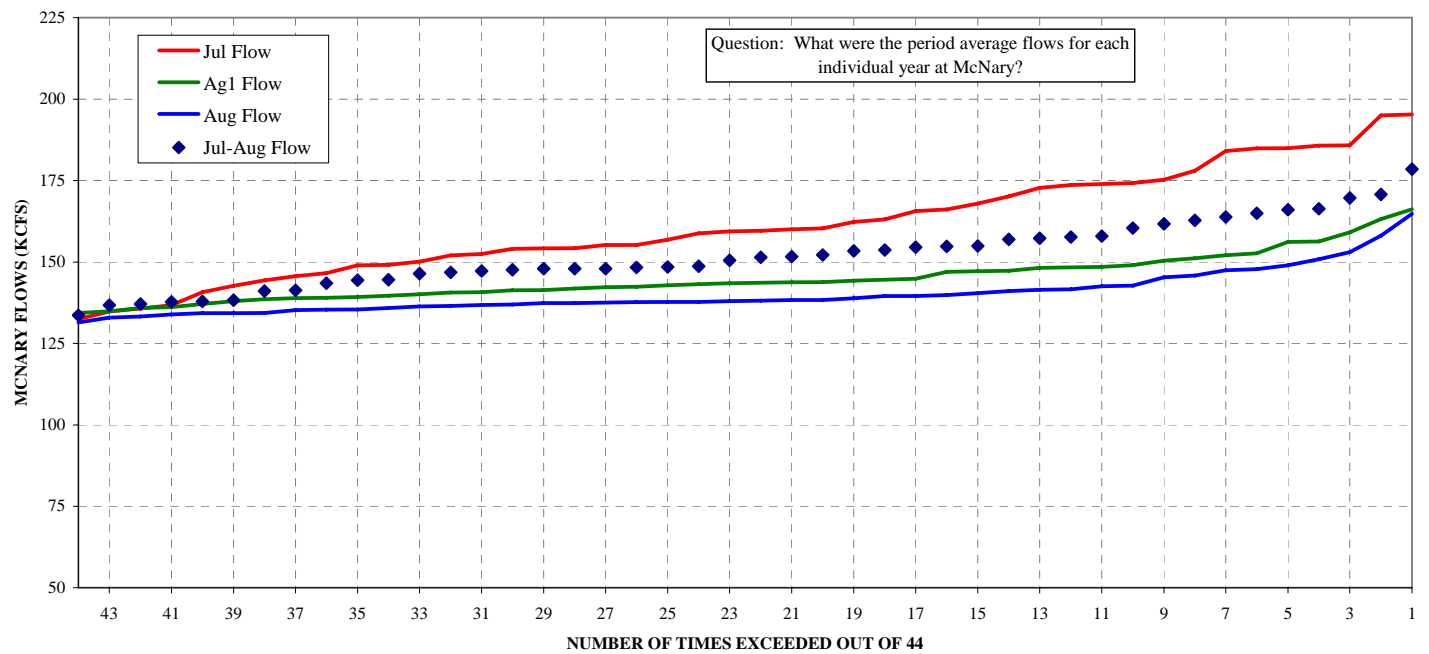
USES ESP INFLOWS

MCNARY ESP OUTFLOW APRIL - JUNE AVERAGES



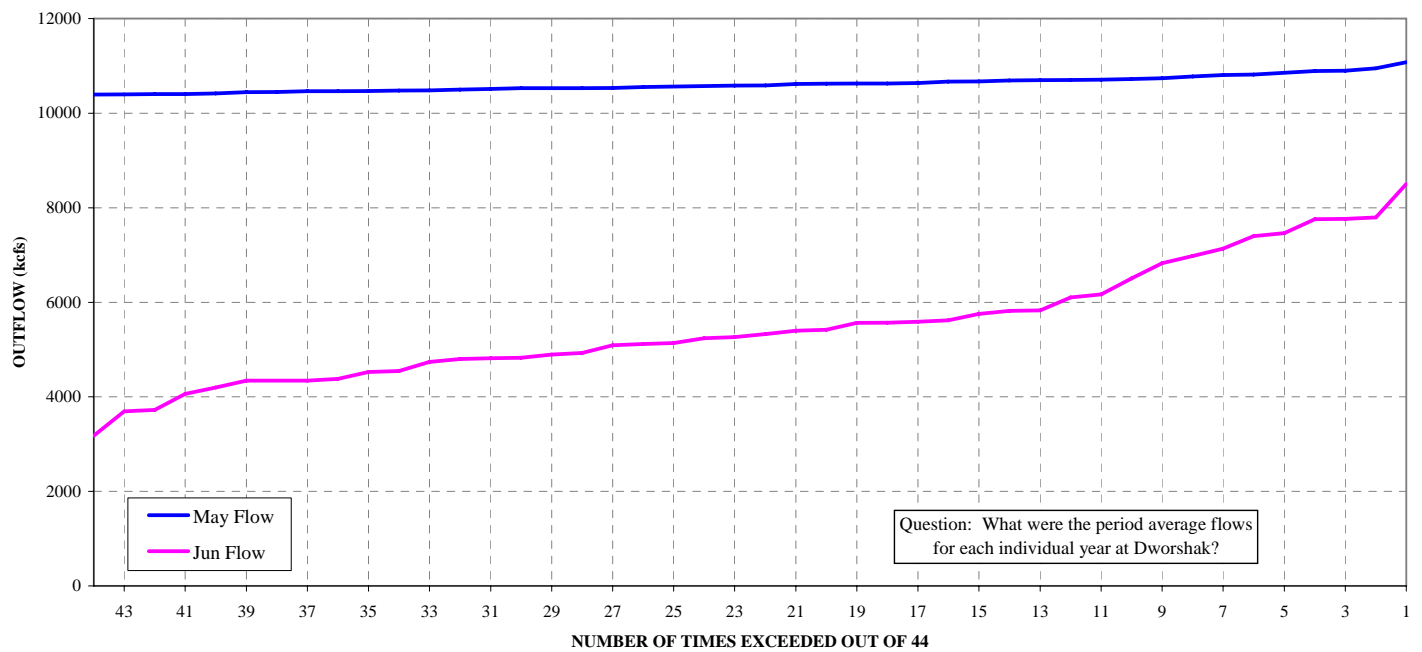
USES ESP INFLOWS

MCNARY ESP OUTFLOW JUL-AUG AVERAGES



USES ESP INFLOWS

DWORSHAK ESP OUTFLOWS



USES ESP INFLOWS

LOWER GRANITE ESP APRIL - JUNE FLOWS

